SYSTEM AND METHOD FOR TCP CONNECTION PROTECTION SWITCHING

ABSTRACT OF THE DISCLOSURE

If an active router Master Control Processor (MCP) fails, a backup MCP switches over without interrupting peer network router connections, because all previously established connection parameters are replicated on both MCPs. Once the MCP programs line cards, the packet forwarding modules and embedded system function without further involvement of the MCP until the next programming update. Messages flow through the backup MCP and then through the active MCP, which outputs messages through the backup MCP. Thus the backup MCP captures state changes before and after the active MCP. Both MCPs maintain replicated queues in which they store replicated messages awaiting processing or retransmission. If acknowledgment of receiving a transmitted message is received from a destination peer router, that message is deleted from both MCPs. If acknowledgment is not received within a predetermined interval, the stored message is retransmitted. Message splicing prevents lost and partially transmitted messages during and after switchovers.